

Technology Notes

ELECTRONICS

Supersensitive TV Camera

Development of a TV camera tube that can transmit a picture in normal room lighting was announced by Bell Telephone Laboratories. BTL hopes the tube can be used in a visual telephone system.

Heart of the new tube is a coin-sized target made up of more than a quarter million light-sensitive solid state electronic switches, called photodiodes, which convert light energy into electrical energy. When an image falls on the target, the diodes that receive bright light are turned on, and those that are in shade stay off, so that the light image is converted into a pattern of electrical charges. As in the presently-used vidicon tube, the target pattern is bombarded by a constantly-moving beam of electrons from an electron gun at the back end of the tube. The electron beam scans the pattern and converts it into a TV signal to be transmitted.

MATERIALS

Nickel-plastic at Low Heat

A new method of nickel-plating ABS plastics was developed by Borg Warner Corporation's Marbon Chemical Division. The new method, which includes five chemical steps, takes place at low temperatures, which reduces warping resulting from the high temperatures used in other systems.

ABS (acrylonitrile-butadiene-styrene) plastics have

been found useful in plumbing and drainage applications, but are sensitive to high temperatures.

INSTRUMENTATION

Hodoscope Balloon-Borne

The hodoscope, a device used to measure cosmic rays when these were the main source of high-energy particles, has been revived, transistorized and sent aloft in a balloon by University of Maryland physicist Dr. James A. Earl. Main object of the aerial tests is to track cosmic ray electrons, believed by Dr. Earl to produce the galactic radio noise that astronomers hear with radio telescopes.

The hodoscope consists of a series of geiger counter layers which are sandwiched between lead plates. As a cosmic ray particle penetrates the instrument, its path is determined by the geiger counters it activates. Its energy is computed from how much it is slowed down by the lead plates.

MECHANICAL ENGINEERING

Vibration Pile-Driver

Mechanical engineers at Ohio State University claim to have found a way to drive steel piles by vibration. An unbalanced rotating weight at the top of the pile caused small vibrations, enough to drive the pile, according to a recent OSU Research Review.

New Ideas and Gadgets

Intravenous Infusion Guard

The exact amount of blood, plasma or other physiological liquid to be administered to a patient can be controlled, without constant watching, with this electronic device which sounds an alarm when the fluid drops to a predetermined level in the container. The system can be connected to a control panel by the nurse's desk to activate a warning light and buzzer.

Veinguard, Portex Trading Corp., 19 Rector St., New York, N.Y. 10006

White Glass Chalkboard

Colored chalk is used to write on this white chalkboard that doubles as a projection screen for rear as well as front projection of slides or movies. A versatile teaching aid, the chalkboard is made of white translucent glass on which an enamel coating is fused. It comes in sizes from 18 by 36 to 72 by 140 inches.

Pittsburgh Plate Glass Co., One Gateway Center, Pittsburgh, Pa. 15222

Hot Drink Dispenser

A cup of hot coffee is made available at any time while on the road by this pot which is heated through the car's cigarette lighter socket. The pot which holds almost

two pints of liquid is thermostatically controlled and is made in models for 6- or 12-volt batteries. In summer the pot keeps beverages cold for many hours.

Orlando Products Co., 6309 Elinore Ave., Baltimore, Md. 21206

Alignment Instrument

Ground movement too small to be detected by conventional techniques can be observed and measured in dams and other areas by means of this instrument that makes use of a stationary light beam. Accurate to one part in a million, the device transmits a light beam to another station as far as 6,000 feet away, recording any displacement.

William S. Robinson, Vice President, R. M. Towill Corp., 1276 Rimer Dr., Moraga, Calif.

Electronic Security System

Theft-prone materials, such as wires, construction equipment and other objects stored outdoors or in low-security storage areas can be protected by this electronic system that requires no wiring. It is composed of a small self-powered sensor and an alarm-receiver located at a watchman's post. Any movement of the device sets off an alarm.

Thug-Chaser Inc., 131 Main St., Hempstead, N.Y. 11550